AMENDMENTS TO THE CLAIMS

The following is a complete listing of revised claims with a status identifier in parenthesis.

1-4. (Canceled)

5. (Previously Presented) The method according to claim 16, wherein the variables comprise initial and current buffer positions used during encoding and decoding of the layer message for the associated communication network layer.

6. (Previously Presented) The method according to claim 16, wherein the methods comprise at least methods for encoding and decoding.

7. (Original) The method according to claim 6, wherein the method for encoding comprises a method for computing message body dependent fields to include message length and CRC fields.

8. (Previously Presented) The method according to claim 16, wherein the step of encoding comprises the steps of:

incrementing a current buffer position by a header length for the layer message of the communication network layer;

setting the initial buffer position value in the context for a subsequent network communication layer equal to the buffer position obtained from the incrementing step; and

repeating the incrementing and setting steps for each subsequent communication network layer.

9. (Canceled)

10. (Previously Presented) The method according to claim 8, further comprising the step of:

terminating buffer incrementing upon detection of an end-of-layer message indicator.

11. (Previously Presented) The method according to claim 8, further comprising the steps of:

moving header field data of each layer message into a message stream; and

moving trailer field data of each layer message into the message stream, wherein the movement of the header field data and trailer field data results in a formatted message stream having disposed therein encoded data obtained from the linked plurality of layer messages.

12. (Previously Presented) The method according to claim 11, wherein the trailer field data associated with each layer message comprises CRC/FCS data.

13. (Previously Presented) The method according to claim 16, wherein the step of linking entails linking layer messages comprising unformatted layer values.

14. (Previously Presented) The method according to claim 16, wherein the encoding step encodes each layer message of the linked plurality of layer messages into a single buffer.

15. (Currently Amended) A method for processing a layered message for transmission over a communication network having a layered architecture to form a formatted layered message having encoded data, comprising:

combining unformatted elements by linking a plurality of layer messages based on addresses of contexts for the communication network layers, each context associated with one of the plurality of communication network layers and providing variables and methods for the associated communications network layer, the methods including at least one of encoding and decoding methods; and

processing the unformatted elements to form the formatted layered message after the combining step.

16. (Currently Amended) A method of processing a message in a communication network having a layered architecture, the method comprising:

linking a plurality of layer messages by including an address of a context for a communication network layer in a layer message of a subsequent communication network layer, the context associated with the communication network layer and providing variables and methods for the associated communication network layer, the methods including at least one of encoding and decoding methods; and

encoding each layer message after the step of linking is complete.

17. (Previously Presented) The method according to claim 16, wherein the linking step comprises:

passing an address of a context for the communication network layer to the subsequent communication network layer, which is adjacent to the communication network layer; and

setting a message body address of the layer message for the subsequent communication network layer to the passed address.

18. (Previously Presented) The method according to claim 8, wherein the incrementing step comprises:

summing, when a header length for a communication network layer is variable, header lengths for each previous communication network layer; and

incrementing the current buffer position by the sum.

19. (Previously Presented) The method of claim 16, wherein the layered architecture includes a plurality of communication network layers, and wherein an address for a context layer for each communication network layer is included in each layer message of a subsequent communication network layer, each subsequent transmission layer being subsequent to a one of the plurality of communication network layers.